



Groundwater Exceedances



Hunters Point Naval Shipyard

Exceedances of Groundwater Remedial Goals and Trigger Levels

Hunters Point Naval Shipyard
BCT Meeting
October 24, 2013



Groundwater Exceedances



WHAT ARE RGs AND TLs?

- Analyte-specific and location-specific numerical criteria for groundwater, as specified in HPNS CERCLA documents
- **RGs:** Based on human health exposure for planned land use (residential, industrial, construction worker)
- **TLs:** Based on protection of the environment (i.e., surface water quality)



Groundwater Exceedances



EXCEEDANCE REPORTING

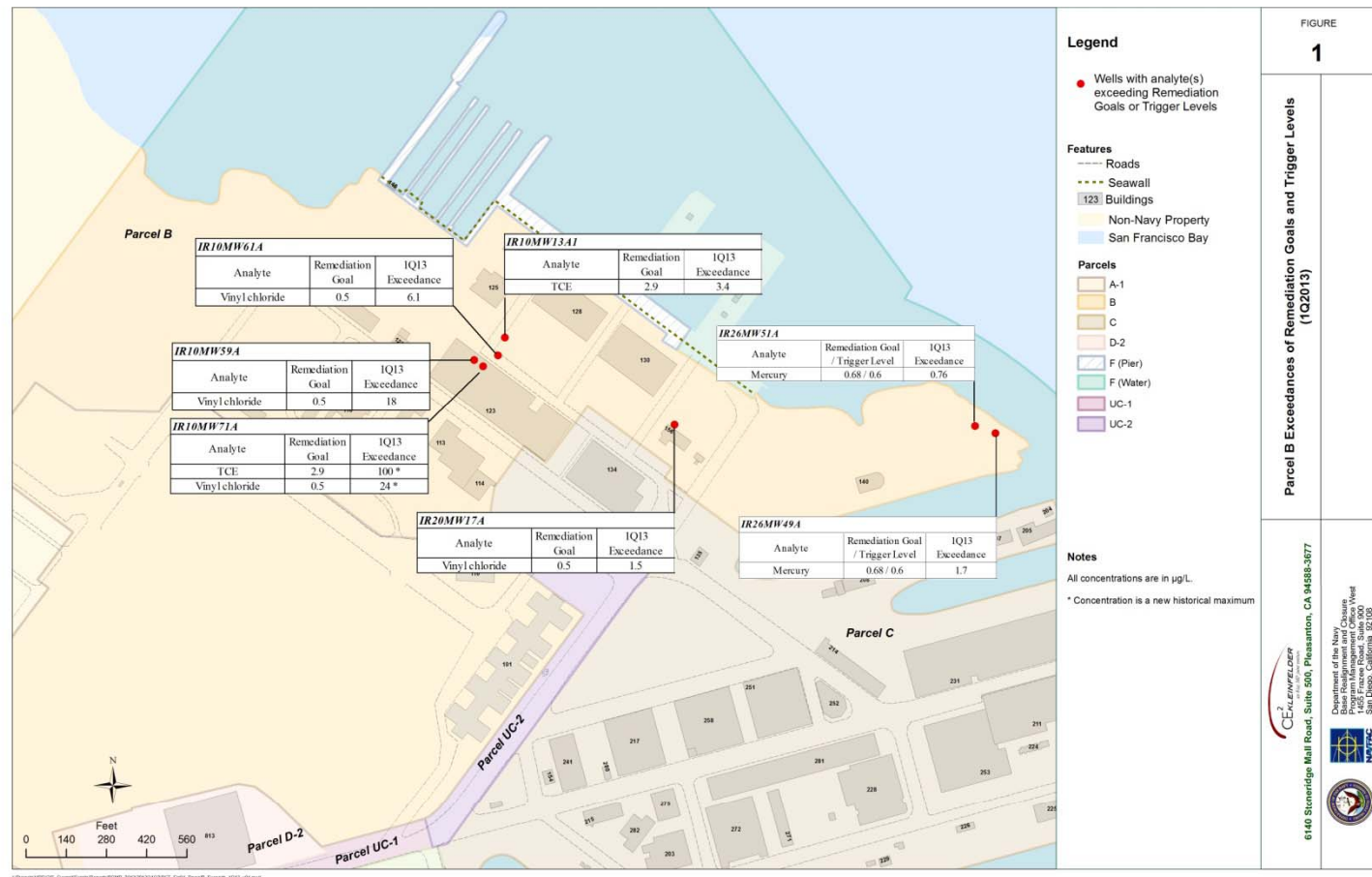
- Exceedance Memoranda following each semiannual sampling event (as soon as validated data are available and reviewed)
- Semiannual Groundwater Monitoring Reports (tables, figures, and text discussion)



Groundwater Exceedances



PARCEL B





Groundwater Exceedances



PARCEL B

- All 13 wells with RGs/TLs sampled in 1Q2013
- Total of 79 RGs/TLs for these wells
- Seven wells (eight analytical results) had exceedances:

Metals: mercury

VOCs: TCE, vinyl chloride

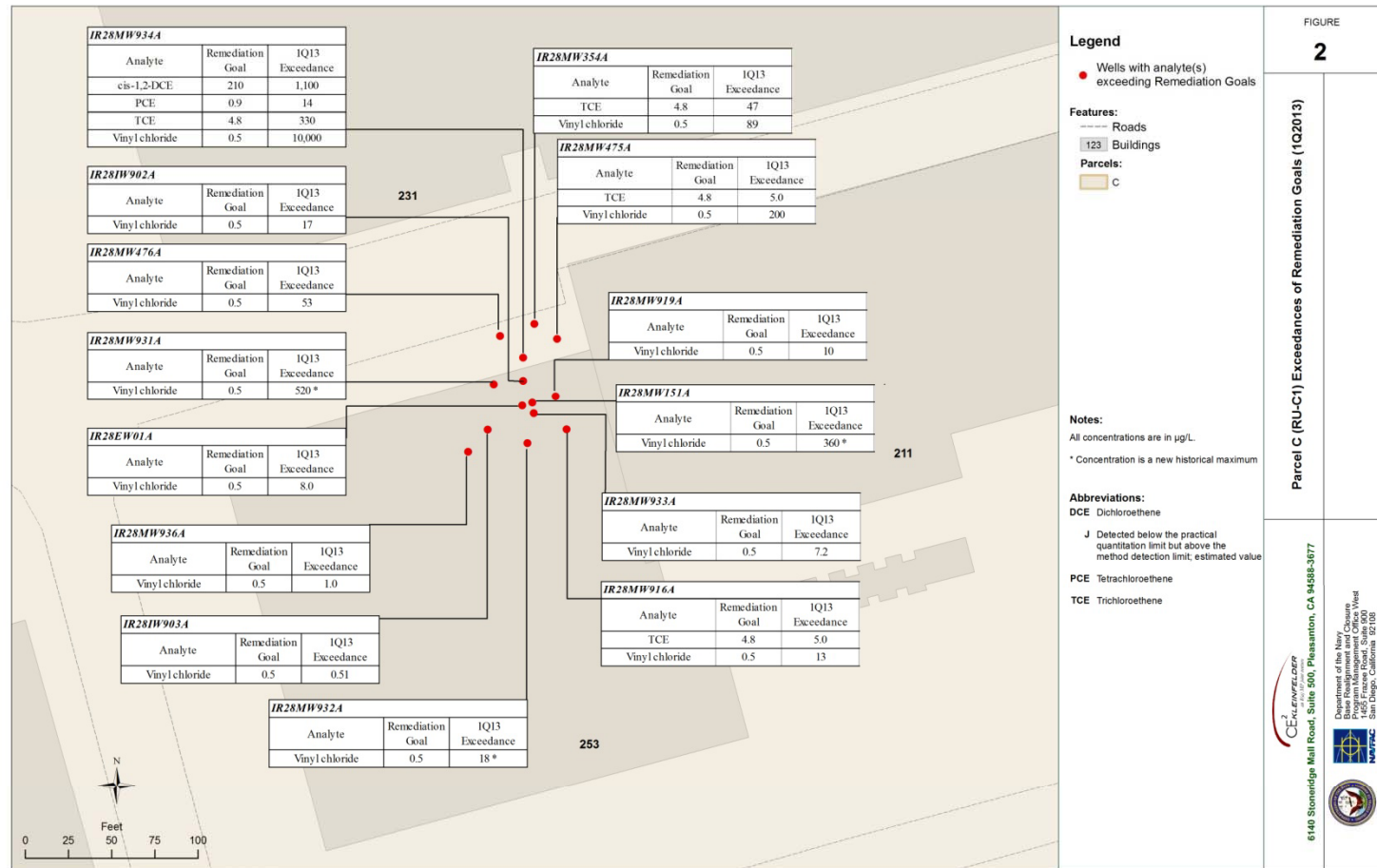
- Remedial action to address VOC groundwater contamination is ongoing
- To collect more information on transport of residual mercury in groundwater, a mass flux evaluation for mercury is planned for 2014



Groundwater Exceedances



PARCEL C, RU-C1





Groundwater Exceedances



PARCEL C, RU-C1

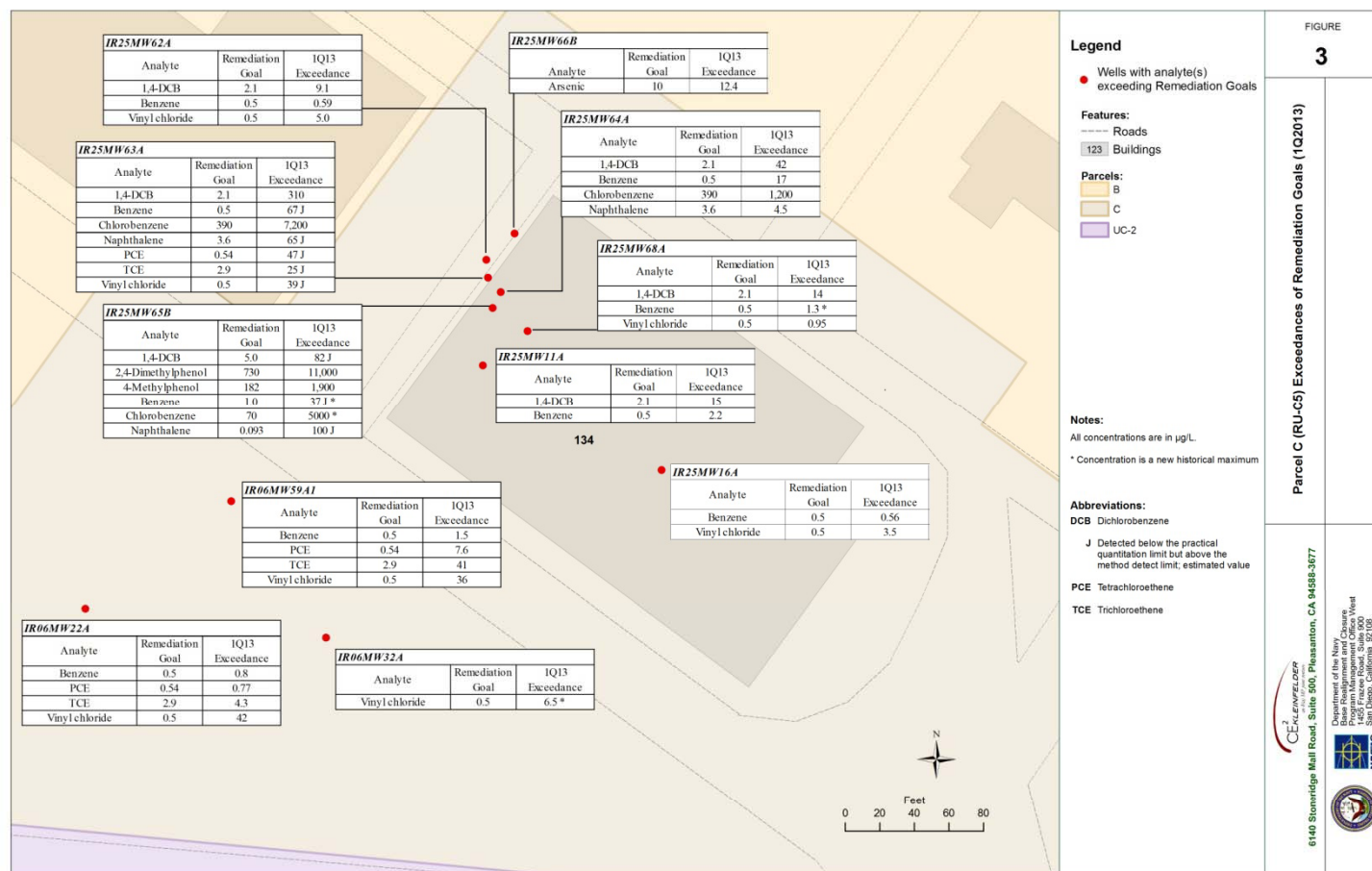
- All 21 wells with RGs sampled in 1Q2013
- Total of 104 RGs for these wells (no TLs applicable to the current BGMP)
- 14 wells (21 analytical results) had exceedances:
VOCs: cis-1,2-DCE, PCE, TCE, vinyl chloride
- Remedial action to address groundwater contamination is ongoing



Groundwater Exceedances



PARCEL C, RU-C5





Groundwater Exceedances



PARCEL C, RU-C5

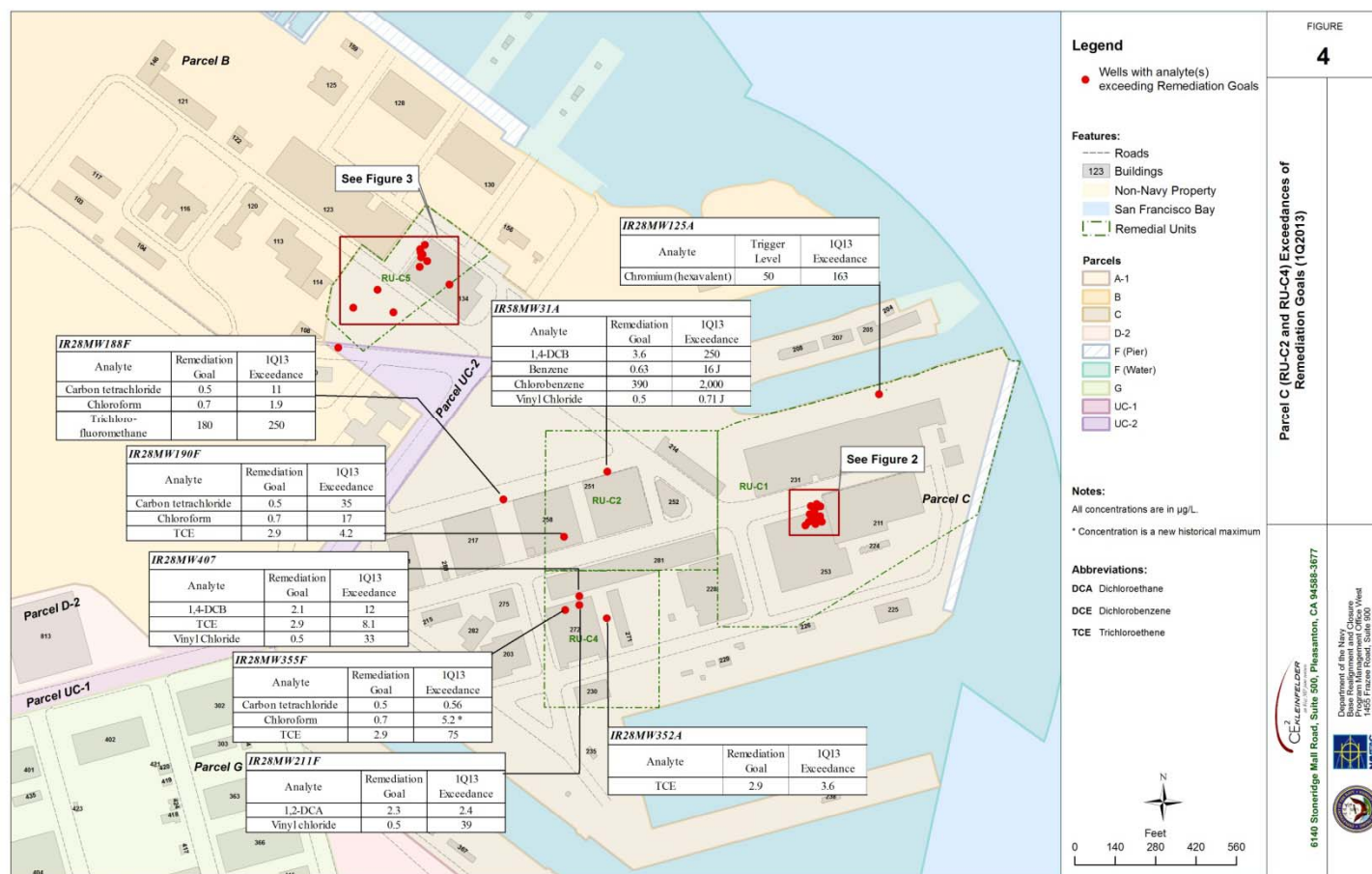
- 17 wells with RGs sampled in 1Q2013
(one inaccessible well with RGs was not sampled)
- Total of 310 RGs for these wells (no TLs applicable to the current BGMP)
- 11 wells (37 analytical results) had exceedances:
 - VOCs: benzene; chlorobenzene; 1,4-dichlorobenzene; 2,4-dimethylphenol; 4-methylphenol; naphthalene; PCE; TCE; vinyl chloride
 - Metals: arsenic (slight exceedance)
- Remedial action to address groundwater contamination is ongoing



Groundwater Exceedances



PARCEL C, OTHER AREAS (INCLUDES RU-C2,4)





Groundwater Exceedances



PARCEL C, RU-C2

- All three wells with RGs sampled in 1Q2013
- Total of 67 RGs for these wells (no TLs applicable to the current BGMP)
- All three wells (10 analytical results) had exceedances:

VOCs: 1,4-dichlorobenzene; benzene; carbon tetrachloride; chlorobenzene; chloroform; TCE; trichlorofluoromethane; vinyl chloride
- Remedial action to address groundwater contamination is ongoing



Groundwater Exceedances



PARCEL C, RU-C4

- Four wells with RGs sampled in 1Q2013
(one inaccessible well with RGs was not sampled)
- Total of 60 analytes with RGs (no TLs applicable to the current BGMP)
- All four wells (nine analytical results) had exceedances:

VOCs: 1,4-dichlorobenzene; 1,2-dichloroethane;
carbon tetrachloride; chloroform; TCE;
vinyl chloride
- Remedial action to address groundwater contamination is ongoing



Groundwater Exceedances



PARCEL C, WELL IR28MW125A

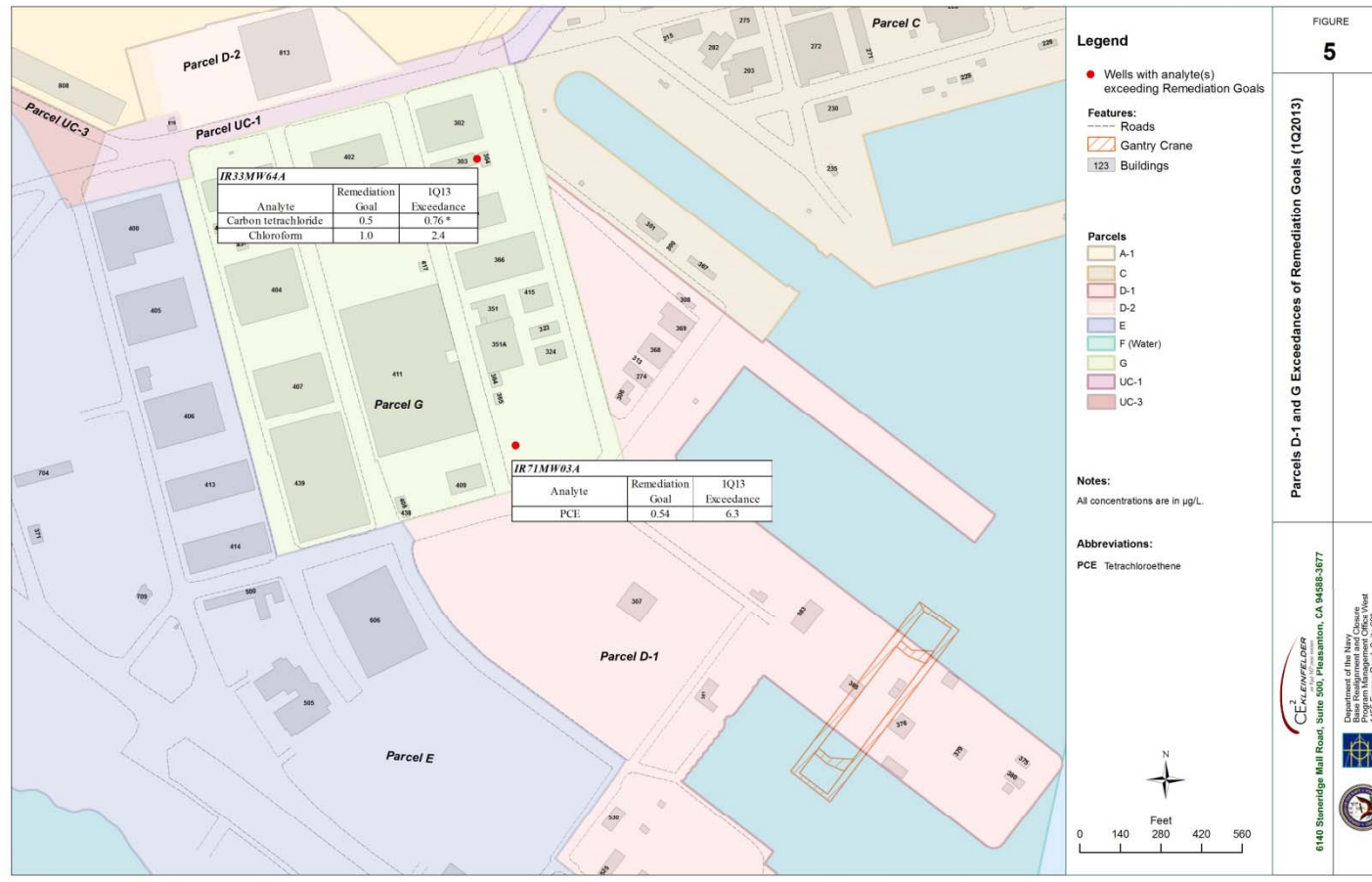
- Downgradient of RU-C1
- Analyzed only for hexavalent chromium
- Exceedance reported in 1Q2013



Groundwater Exceedances



PARCELS D-1 AND G





Groundwater Exceedances



PARCEL D-1

- Three wells with RGs/TLs sampled in 1Q2013
(one inaccessible well with TLs was not sampled)
- Total of 15 RGs/TLs for these wells
- No exceedances
- A groundwater treatability study (ZVI injection) was completed in 2008 at IR-33 and IR-71 and successfully reduced groundwater concentrations to below RGs in all wells.



Groundwater Exceedances



PARCEL G

- All five wells with RGs sampled in 1Q2013
- Total of 12 RGs for these wells (no TLs applicable to the current BGMP)
- Two wells (three analytical results) had exceedances:

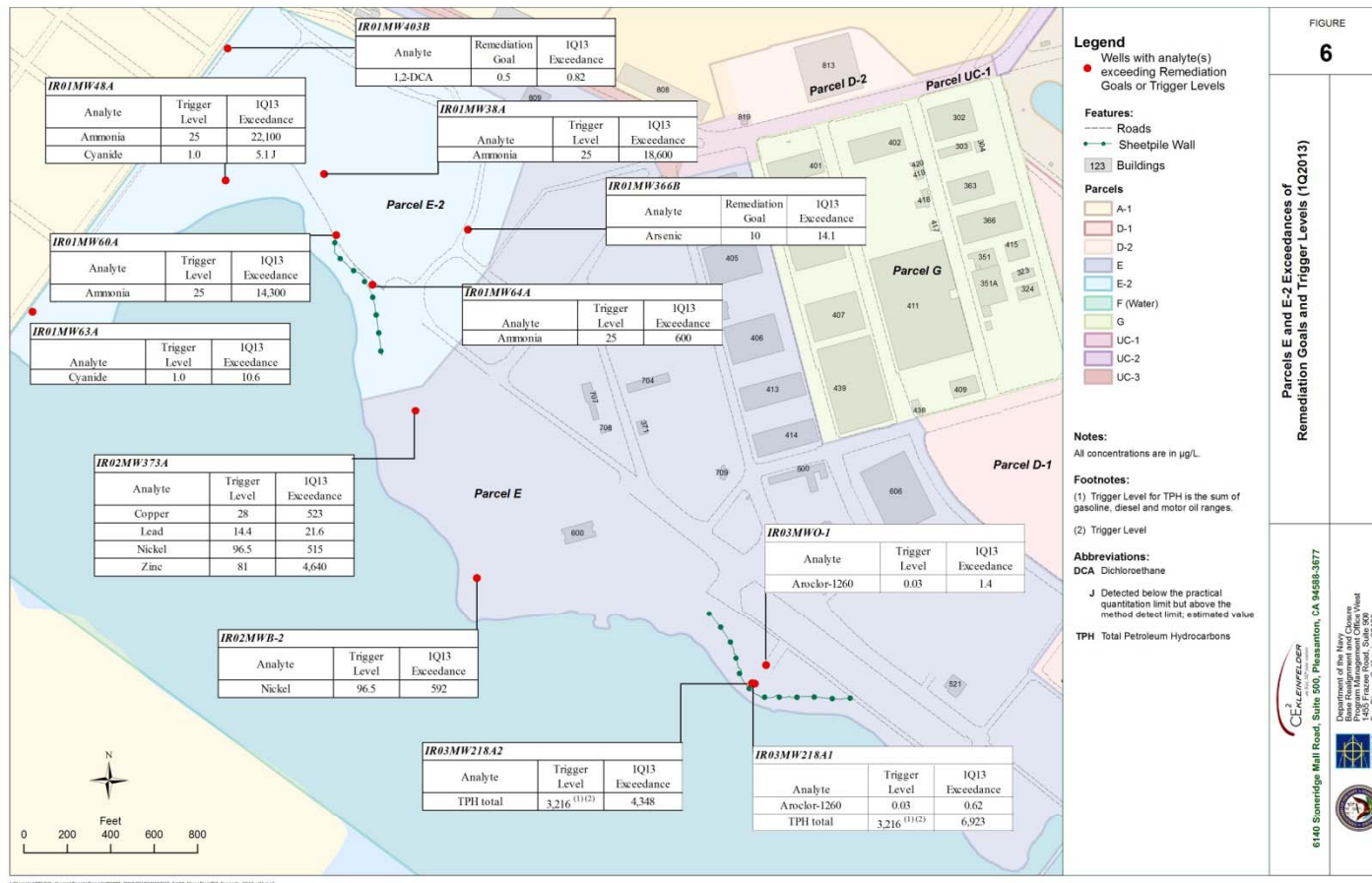
VOCs: carbon tetrachloride, chloroform, PCE
- A groundwater treatability study (ZVI injection) was completed in 2008 at IR-33 and IR-71 and successfully reduced groundwater concentrations to below RGs in all but two wells.



Groundwater Exceedances



PARCELS E AND E-2





Groundwater Exceedances



PARCEL E

- 37 wells with RGs/TLs sampled in 1Q2013
(six inaccessible wells with RGs/TLs were not sampled)
- Total of 226 RGs/TLs for these wells
- Five wells (nine analytical results) had exceedances:
 - Metals: copper, lead, nickel, zinc
 - Other: Aroclor-1260, TPH
- Remedial action in Parcel E has not begun
(A groundwater treatability study was successful in reducing groundwater concentrations to below RGs/TLs in majority of the wells)



Groundwater Exceedances



PARCEL E-2

- All three wells with RGs/TLs sampled in 1Q2013
- Total of 252 RGs/TLs for these wells
- Seven wells (eight analytes) had exceedances:

VOCs: 1,2-dichloroethane

Metals: arsenic

Other: ammonia, cyanide

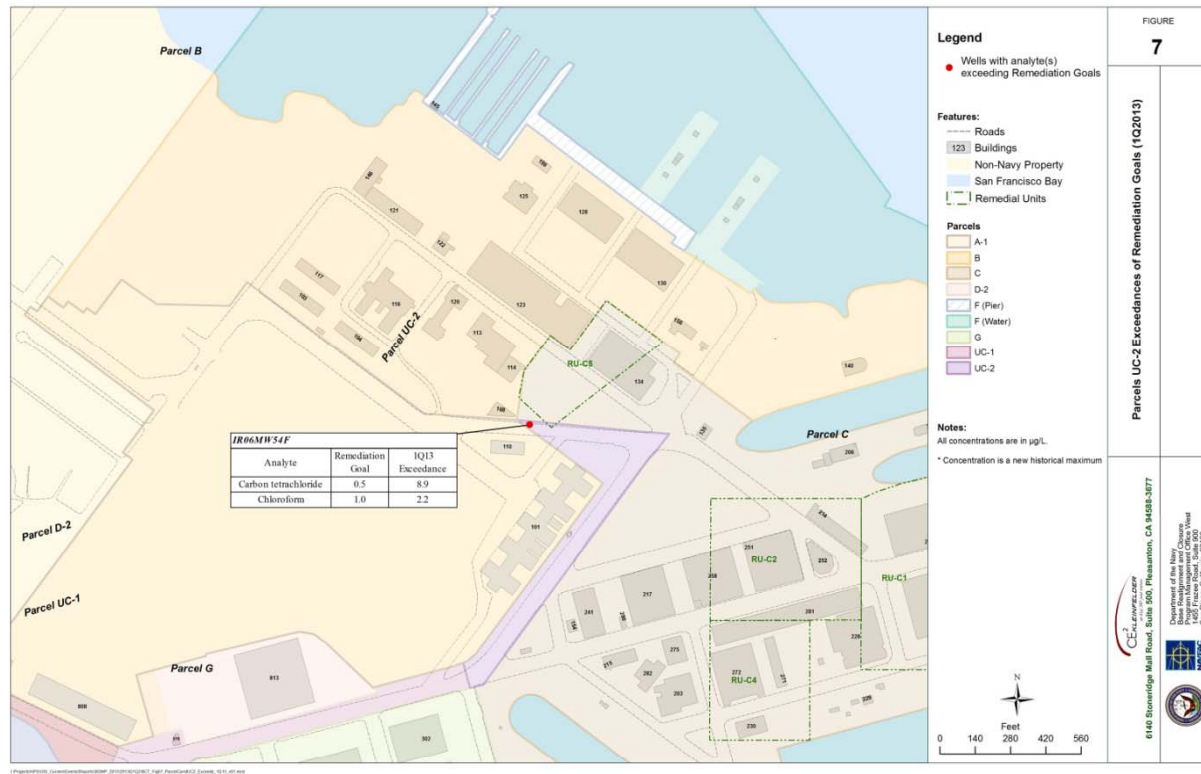
- Remedial action in Parcel E-2 has not begun



Groundwater Exceedances



PARCEL UC-2





Groundwater Exceedances



PARCEL UC-2

- All three wells with RGs sampled in 1Q2013
- Total of six RGs for these wells
- One well (two analytes) had exceedances:
carbon tetrachloride; chloroform
- Monitored Natural Attenuation (MNA) is the ROD-specified groundwater remedial action



Groundwater Exceedances



Questions?